

(712)

Release 3.1A, John F. Collins, Biocomputing Research Unit
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Mpsrch_pp    protein - protein database search, using Smith-Waterman algorithm
Run on:      Sat May 13 08:40:18 2000;      Masp3 time 4.47 seconds
Tabular output not generated.              318.123 Million cell updates/sec

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Title: >US-09-331-631-21
Description: (32-91) From US09331631.pep
Perfect Score: 453
Sequence: 1 TENPAAQACILASQCODEPDDL.....DTGATNRHHPGERTGTGRP 60C

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Scoring table: PAM 150
Gap 11

Searched: 188963 seqs, 23686106 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

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Database: a-geneseq35
          1:geneseqp
```

Statistics: Mean 24.616; Variance 91.839; scale 0.2668

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description	Pred. No.
1	453	100.0	614	1	M62834	Arachis hypogaea anti	4.98e-35
2	453	100.0	614	1	M22143	Peanut allergen Ara hi	4.98e-35
3	396	87.4	606	1	M22150	Peanut allergen Ara hi	1.02e-32
4	119	26.3	625	1	M62838	Glycine max antimicrob	2.44e-03
5	93	20.5	660	1	W49015	Human KAL protein.	6.89e-01
6	93	20.5	660	1	R34445	Sequence encoded by a	6.89e-01
7	83	18.3	625	1	M62830	Macadamia integrifolia	5.48e+00
8	81	17.9	525	1	M62831	Theobroma cacao antimi	8.24e+00
9	81	17.9	566	1	R20181	Sequence encoded by 67	8.24e+00
10	77	17.0	550	1	M62832	Gossypium hirsutum ant	1.84e+01
11	77	17.0	666	1	M62828	Macadamia integrifolia	1.84e+01
12	77	17.0	666	1	M62829	Macadamia integrifolia	1.84e+01
13	75	16.6	149	1	P70057	Human insulin receptor	2.74e+01
14	75	16.6	232	1	W15773	Protein cognate of pro	2.74e+01
15	74	16.3	663	1	M36794	Novel human protein, d	3.34e+01
16	73	16.1	593	1	M62835	Zea mays antimicrobial	4.06e+01
17	72	15.9	144	1	M20194	H. pylori membrane pro	4.94e+01
18	70	15.5	500	1	M30843	Partial rat thrombomod	7.28e+01
19	70	15.5	559	1	M30844	Partial rat thrombomod	7.28e+01
20	70	15.5	577	1	M30845	Rat thrombomodulin.	7.28e+01
21	70	15.5	966	1	R15047	Soluble human insulin	7.28e+01
22	70	15.5	1087	1	R15139	B lymphocyte membrane	7.28e+01
23	70	15.5	1370	1	P60005	Sequence encoded by hu	7.28e+01

45	68	15.0	746	1	W85135	Human desaturase enzym	1.07e+02
43	68	15.0	746	1	W84156	Human desaturase enzym	1.07e+02
44	68	15.0	746	1	W84153	Human desaturase enzym	1.07e+02
43	68	15.0	662	1	W74573	Human cyclin D1/cyclin	1.07e+02
42	68	15.0	509	1	W00936	Human cyclin D1/cyclin	1.07e+02
41	68	15.0	547	1	W10397	Human cyclin D1/cyclin	1.07e+02
42	68	15.0	509	1	W00936	Human cyclin D1/cyclin	1.07e+02
41	68	15.0	547	1	W10397	Human cyclin D1/cyclin	1.07e+02
39	68	15.0	306	1	W85132	Human desaturase enzym	1.07e+02
38	68	15.0	306	1	W85131	Human desaturase enzym	1.07e+02
36	68	15.0	255	1	W26568	Human 4-11B receptor	1.07e+02
35	68	15.0	255	1	W26568	Human 4-11B receptor	1.07e+02
34	68	15.0	219	1	W41149	Human 4-11B receptor	1.07e+02
34	68	15.0	219	1	W41149	Human 4-11B receptor	1.07e+02
33	68	15.0	219	1	W92534	Human 4-11B receptor	1.07e+02
33	68	15.0	219	1	W92534	Human 4-11B receptor	1.07e+02
32	68	15.2	255	1	W72017	Human 4-11B receptor	1.07e+02
31	69	15.2	220	1	W72017	Human 4-11B receptor	1.07e+02
30	69	15.2	148	1	W86239	Human 4-11B receptor	1.07e+02
29	69	15.2	148	1	W86239	Human 4-11B receptor	1.07e+02
28	69	15.2	121	1	W86230	Human 4-11B receptor	1.07e+02
27	69	15.2	121	1	W86230	Human 4-11B receptor	1.07e+02
26	69	15.2	111	1	W86232	Human 4-11B receptor	1.07e+02
25	69	15.2	106	1	W86233	Human 4-11B receptor	1.07e+02
24	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
23	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
22	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
21	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
20	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
19	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
18	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
17	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
16	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
15	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
14	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
13	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
12	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
11	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
10	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
9	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
8	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
7	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
6	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
5	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
4	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
3	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
2	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01
1	70	15.5	1382	1	R77440	Wild type human insulin	7.28e+01

ALIGNMENTS

RESULT 1
ID M62834 standard; peptide; 614 AA.
AC M62834:
DT 27-OCT-1998 (first entry)
DE *Arachis hypogaea* antimicrobial protein.
KW antimicrobial protein; infection; control.
OS *Arachis hypogaea*.
PN M09827805-A1.
PD 02-JUL-1998.
PF 22-DEC-1997: AU00874.
PR 20-DEC-1996: AU-004275.
FA (REFR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;
DR MRC: 98-37729/32.
PT Novel anti-microbial protein from e.g. *Macadamia integrifolia* -
PT useful for controlling microbial infestations of plants or mammals
PS Claim 1: Page 55-57: 96pp; English.
CC The sequence is that of an antimicrobial protein which can
CC be used to control microbial infestations in plants and mammalian
CC animals.
CQ Sequence 614 AA;

Query Match	Score	DB 1	Length
100.0%	453	1	614

Matches	60;	Conservative	0;	Mismatches	0;	Indels	0;	Gaps	0;
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Dd 32 TENPCAQRCLSCQQEPEDDLKQACESRCIKLEYDPRCVYIDGATNQRHPGEERTGRQP 91
 |||||
.0Y 32 TENPCAQRCLSCQQEPEDDLKQACESRCIKLEYDPRCVYIDGATNQRHPGEERTGRQP 91

RESULT 2

DT 29-DEC-1997 (first entry)

DE peanut allergen Ara hi.

MM vaccine; anaphylactic shock; immunotherapy; therapy;

Arachis hypogaea strain F1Orunner

FH	Key	Location/Qualifiers
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FT	peptide	1.	22

FT	label= Sig_peptide
FT	FT

FT	Protein	23. .614	Mat	proteins
FT	Protein	23. .614	Mat	proteins

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FT: Modified site 521: 523
    /jacobi-mac-process

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/notes="N-glycosylation site"
FTT

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PN MO59724139-A1.
PD 10-JUL-1997.
PF 23-SEP-1996: U15222.
PR 04-MAR-1996: US-610424.
PR 29-DEC-1995: US-009453.
PA (UVAR-) UNIV ARKANSAS.
PI Bannon GA, Burks AW,
DR WPI: 97-363453/33. Cockrell G, Helm RM, Stanley JS;
DR N-PSDB: T76612.
PT Peanut allergens Ara hi and Ara hII - used for vaccination and in
PT two-site monoclonal antibody based ELISA
PS Claim 31. Page 169; 354dp. English.
CC This polypeptide comprises major peanut allergen Ara hi (W22149).
CC Its sequence was deduced from cDNA clone p17 (T76612), isolated
CC from peanut seed cDNA using a primer (see T76616) based on an
CC isolated Ara hi peptide (see W24206). The sequence shows
CC significant homology with the vicilin family of seed storage
CC proteins of other legumes. The allergen is recognised by serum
CC IgE from a large proportion of individuals with peanut
CC hypersensitivity. Ara hi and Ara hII (see W24164) can be used to
CC raise monoclonal antibodies which are used in a specific two-site
CC MAE ELISA for the detection of Ara hi or Ara hII (claimed). IgE
CC binding Ara hi antigen epitopes (see W24165-87) may be used in
CC vaccines to protect against allergic reactions to peanut allergens,
CC e.g. anaphylactic shock.
SQ Sequence 614 AA;

Db	32	TENPCAQRCLOSCQCEPPDDLKAKACESCRTKLEYDPRCYVDGTGATNQRHPPERTRGROP	100.0%	Score 453:	DB1:	Length 614:
Qy	32	TENPCAQRCLOSCQCEPPDDLKAKACESCRTKLEYDPRCYVDGTGATNQRHPPERTRGROP	Best Local Similarity 100.0%:	Pred. No. 4,98e-39:		
	Matches	60:	Conservative	0:	Mismatches	0:
					Indels	0:
					Gaps	0:
RESULT	3					
ID	W22150	standard; Protein: 626 AA.				
AC	W22150;					
DT	29-DEC-1997	(first entry)				
DE	Peanut allergen Ara hi.					
KW	Peanut; seed storage protein; allergen; allergy; hypersensitivity					
KW	vaccine; anaphylactic shock; immunotherapy; therapy;					
KW	monoclonal antibody; ELISA; analysis; Ara hi.					
OS	Arachis hypogaea strain Florunner.					
FT	Key	Location/Qualifiers				
FT	Peptide	1..22				
FT		/label= Sig_peptide				
FT	Protein	23..626				
FT		/label= Mat_protein				
FT	Modified_site	521..523				
FT		/note="N-glycosylation site"				
PT	MO9724139-A1.					
PD	10-JUN-1997					
PF	23-SEP-1996:	U15222.				
PR	04-MAR-1996:	US-610444.				
PR	29-DEC-1995:	US-009455.				
PA	(UYAR-) UNIV ARKANSAS.					
PI	Bannon GA, Burks AW,	Cockrell G, Helm RM, Stanley JS;				
DR	WPI: 97-363453/33.					
PT	N-PSDB: T76613.					
PT	Peanut allergens Ara hi and Ara hII - used for vaccination and in					
PS	two-site monoclonal antibody based ELISA					
PS	Claim 31: Page 172: 354pp: English.					
CC	This polypeptide comprises major peanut allergen Ara hi (W22149).					
CC	Its sequence was deduced from cDNA clone P41D (T76613), isolated					
CC	from peanut seed cDNA using a primer (see T76615) based on an					
CC	isolated Ara hi peptide (see W24206). The sequence shows					
CC	significant homology with the vicilin family of seed storage					
CC	proteins of other legumes. The allergen is recognised by serum					
CC	IGE from a large proportion of individuals with peanut					
CC	hypersensitivity. Ara hi and Ara hII (see W24164) can be used to					
CC	raise monoclonal antibodies which are used in a specific two-site					
CC						

CC Mab ELISA for the detection of Ara hI or Ara hII (claimed). IgE-
CC binding Ara hI antigen epitopes (see W24155-87) may be used in
CC vaccines to protect against allergic reactions to peanut allergens,
CC e.g. anaphylactic shock.
50 Sequence 626 AA;

RESULT 4
ID M62838 standard; Protein: 605 AA.
AC M62838:
DT 27-OCT-1998 (first entry)
DE Glycine max antimicrobial protein.
KW antimicrobial protein; infestation; control.
OS Glycine max.
PN W09827805-A1.
PD 02-JUL-1998.
PE 22-DEC-1997; AU-004275.
PR 20-DEC-1996; AU-004275.
PT (REFR.) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI Bower NJ, Goulter KC, Green JT, Manners JM, Marcus JP;
DI WPI: 98-377279/32.
PT Novel anti-microbial protein from e.g. *Macadamia integrifolia* -
useful for controlling microbial infestations of plants or mammals
PS Claim 1: Page 63-65: 96pp: English.
CC The sequence is that of an antimicrobial protein which can
be used to control microbial infestations in plants and mammalian
CC animals.
SQ Sequence 605 AA;

FT	/note="Fibronectin type III repeat"
FT	Domain 403..540
FT	/note="Fibronectin type III repeat"
FT	Domain 541..661
FT	/note="Fibronectin type III repeat"
PN	W09824898-A2.
PD	11-JUN-1998.
PD	05-DEC-1997; E06806.

